

Atty. Ref.: 9319S-000711

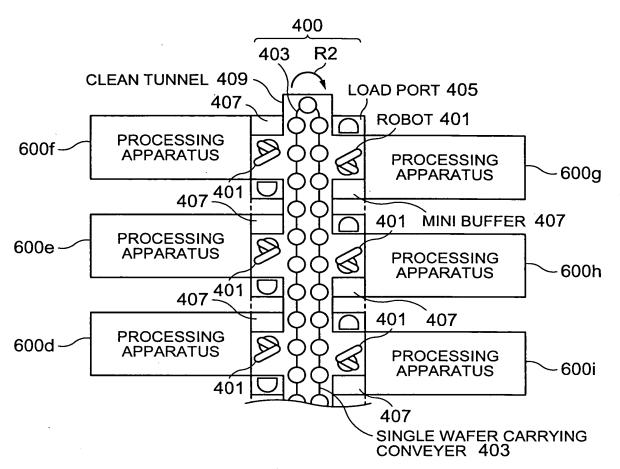


FIG. 2A

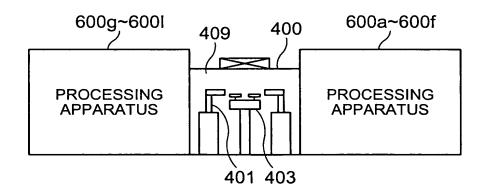


FIG. 2B

Title: MANUFACTURING APPARATUS, AND MANUFACTURING METHOD

Inventors: Shuji TANAKA et al. Atty. Ref.: 9319S-000711

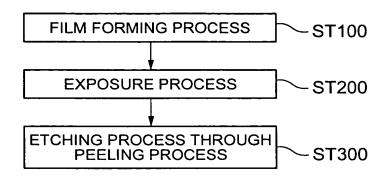
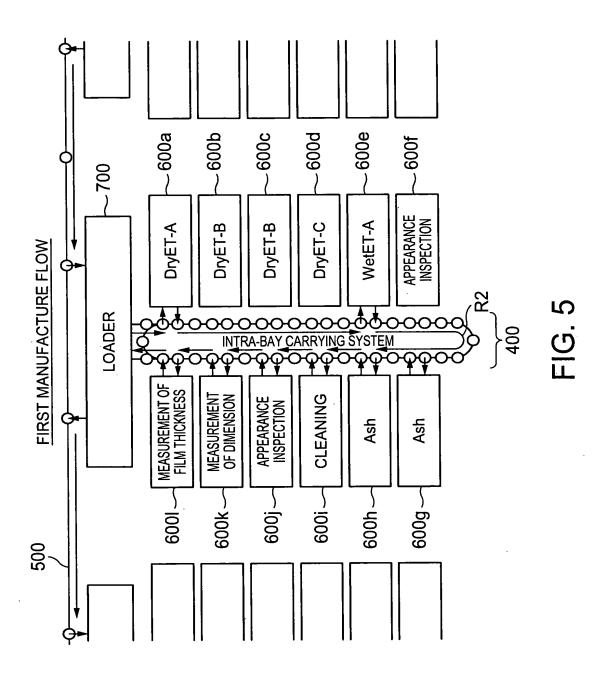


FIG. 3

WetET-A	1
DryET-A	1
DryET-B	2
DryET-C	1
Ash	2
CLEANING	1
APPEARANCE INSPECTION	2
MEASUREMENT OF DIMENSION	1
MEASUREMENT OF FILM THICKNESS	1

FIG. 4



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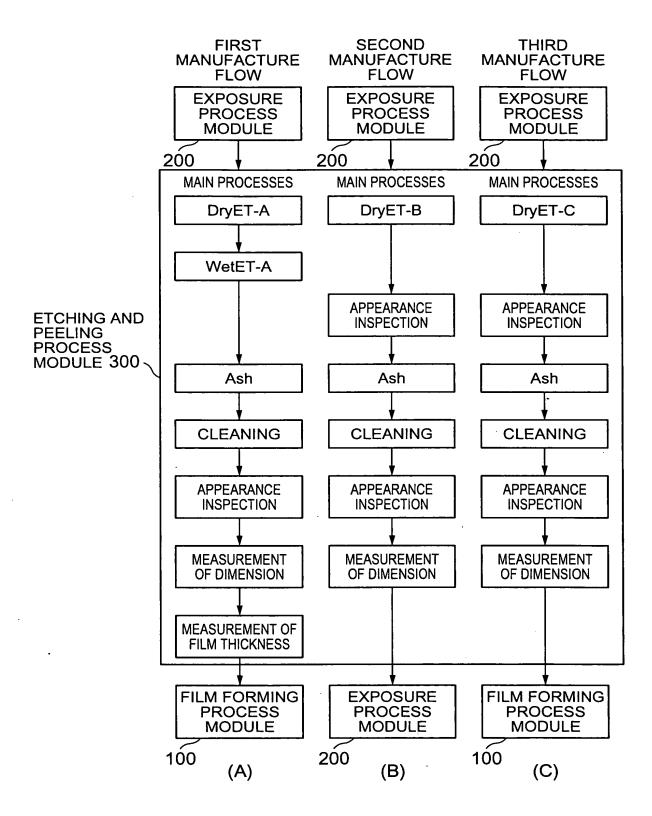
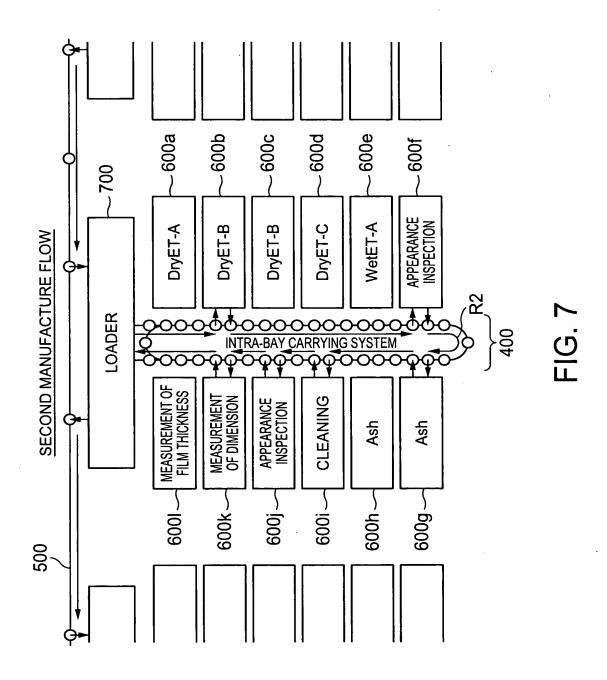
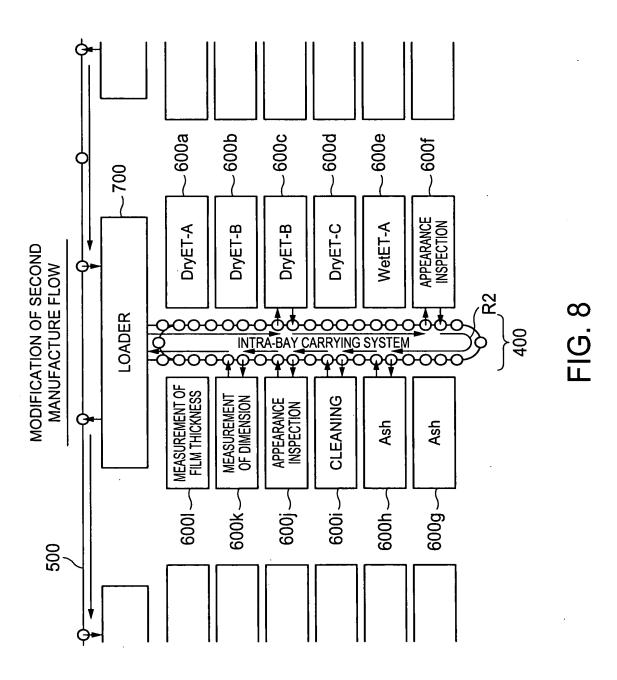
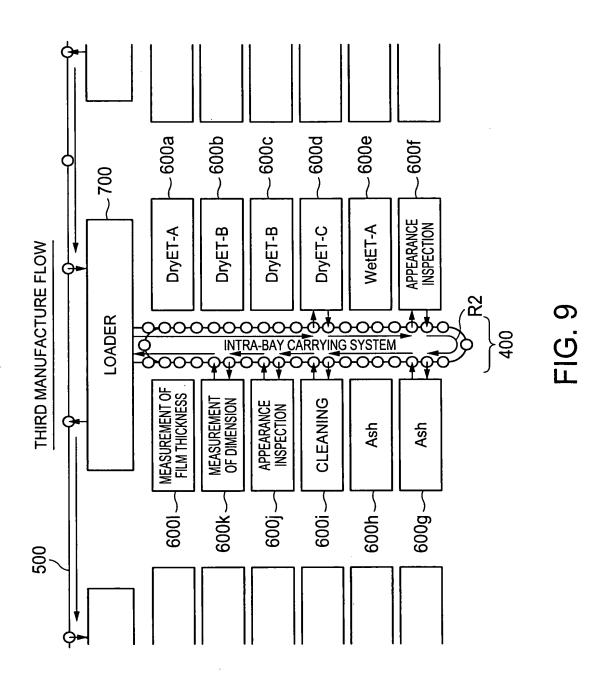


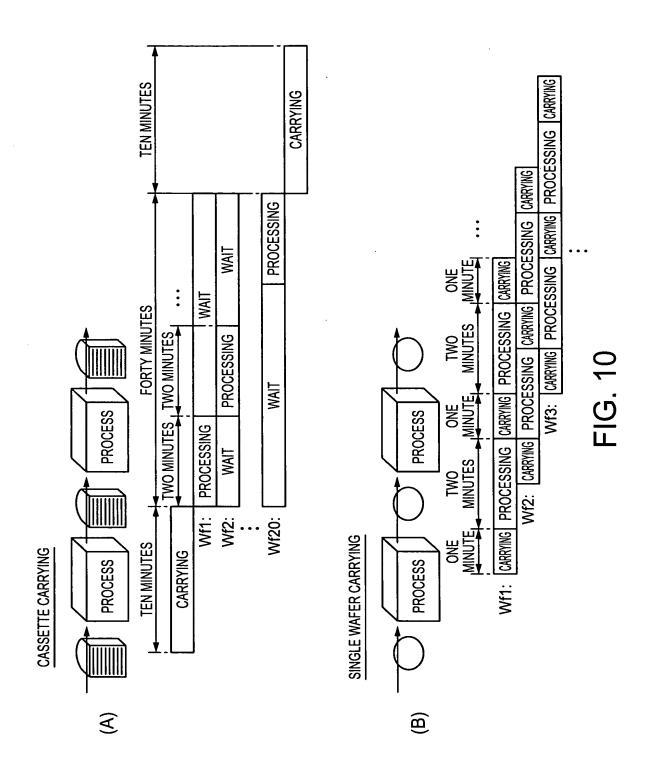
FIG. 6



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Title: MANUFACTURING APPARATUS, AND MANUFACTURING METHOD Inventors: Shuji TANAKA et al.
Atty. Ref.: 9319S-000711

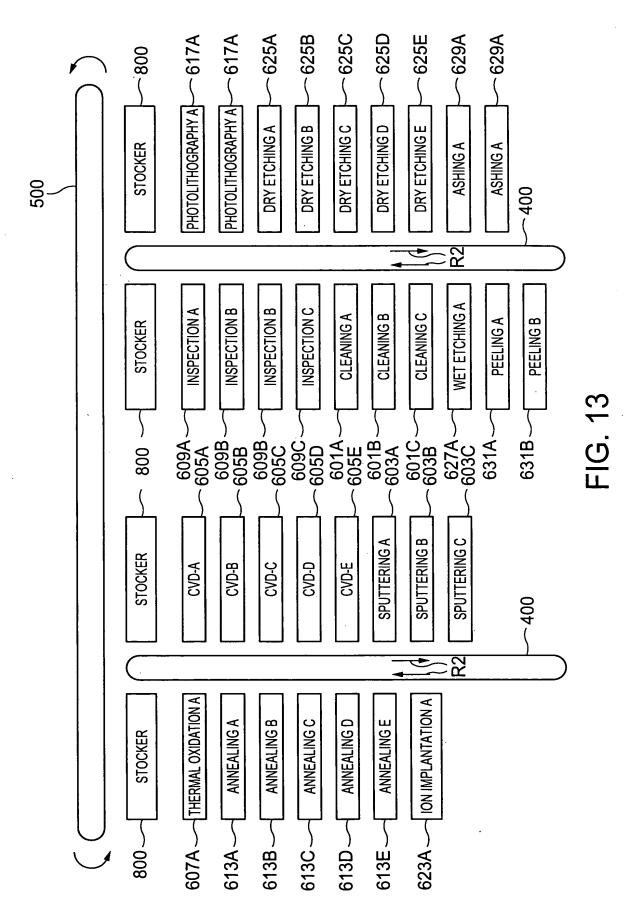
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INSPECTION PROCESS	INSPECTION B		INSPECTION B				INSPECTION B				INSPECTION B	INSPECTION B	INSPECTION B		INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B
			INSP									INSPE	INSP		INSP	INSP	INSPI		INSPE		INSPE
ASHING PEELING PROCESS	PEELING A		PEELING A		PEELING		PEELING A	PEELING A	PEELING A	PEELING A	PEELING A	PEELING A	PEELING		PEELING A	PEELING	PEELING A	PEELING B	PEELING A	PEELING B	PEELING
ASHING PROCESS	ASHING A		ASHING A		ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A		ASHING A	ASHING A	ASHING A	٠	ASHING A	ASHING A	ASHING A
ETCHING PROCESS											WET ETCHING A ASHING A					WET ETCHING A	ETCHING A ASHING A		WET ASHING A		WET ASHING A
ETCHING PROCESS	DRY ETCHING A		DRY ETCHING B				DRY ETCHING B				DRY ETCHING C	DRY ETCHING B	DRY ETCHING C		DRY ETCHING A	DRY WET ETCHING C ETCHING A	DRY ETCHING C	DRY ETCHING D	DRY ETCHING C	DRY ETCHING E	
ION IMPLANTATION PROCESS					INSPECTION ION IMPLANTATION C A	INSPECTION ION IMPLANTATION C		INSPECTION ION IMPLANTATION C	INSPECTION ION IMPLANTATION C	ION IMPLANTATION A	1]	3	1	1		
INSPECTION PROCESS	INSPECTION C		INSPECTION C		INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C		INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C
INSPECTION PROCESS	INSPECTION B		INSPECTION B				INSPECTION B			INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION I		INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B	
CLEANING PHOTOLITHOGRAPHY INSPECTION INSPECTION ION IMPLANTATION PROCESS PROCESS PROCESS PROCESS	PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C		CLEANING ANNEALING CLEANING PHOTOLITHOGRAPHY INSPECTION 8		РНОТОСІТНО ВРАРНУ А	РНОТОLIТНОGRAРНҮ А	PHOTOLITHOGRAPHY INSPECTION A B	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY INSPECTION INSPECTION ION IMPLANTATION A A A	PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C	PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C	PHOTOLITHOGRAPHY A		PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C	PHOTOLITHOGRAPHY INSPECTION B	PHOTOLITHOGRAPHY INSPECTION INSPECTION A C	PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C	NING ANNEALING CLEANING PHOTOLITHOGRAPHY E A A	PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C	РНОТОЦТНО В В РНУ А
		CLEANING	CLEANING				CLEANING					CLEANING A		CLEANING A					CLEANING		
ANNEALING PROCESS		CLEANING ANNEALING CLEANING B A A C	ANNEALING B		ANNEALING C		ANNEALING D					ANNEALING D		ANNEALING CLEANING D A		ANNEALING A			ANNEALING E		
CLEANING PROCESS	CLEANING B		CLEANING B												CLEANING B				CLEANING B	CLEANING B	
INSPECTION PROCESS		INSPECTION A		INSPECTION A							INSPECTION A										
FILM FORMING INSPECTION CLEANING ANNEALING PROCESS PROCESS	SPUTTERING A	CVD-A	GVD-B	THERMAL OXIDATION A	cvp-c		CVD-D				CVD-A	G-QAD-	CVD-C	G-QAD	SPUTTERING A	CVD-E		SPUTTERING B	€VD-€	SPUTTERING C	
CLEANING PROCESS	CLEANING			CLEANING A			CLEANING				CLEANING	CLEANING	CLEANING A			CLEANING A					
LAYER		2	3	4	5	9	آ _~ ا	80	6	5	=	12	13	14	15	16	17	<u>®</u>	6	22	21

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PROCESS NO.	LAYER	APPARATUS	PROCESS NO.	LAYER	APPARATUS	PROCESS NO.	LAYER	APPARATUS
1	1	CLEANING A	55	8	ASHING A	109	15	PEELING A
2	1	SPUTTERING A	56	8	PEELING A	110	15	INSPECTION B
3	1	CLEANING B	57	9	PHOTOLITHOGRAPHY A	111	16	CLEANING A
4	1	PHOTOLITHOGRAPHY A	58	9	INSPECTION C	112	16	CVD-E
5	1	INSPECTION B	59	9	ION IMPLANTATION A	113	16	ANNEALING A
6	1	INSPECTION C	60	9	ASHING A	114	16	PHOTOLITHOGRAPHY A
7	1	DRY ETCHING A	61	9	PEELING A	115	16	INSPECTION B
8	1	ASHING A	62	10	PHOTOLITHOGRAPHY A	116	16	INSPECTION C
9	1	PEELING A	63	10	INSPECTION B	117	16	DRY ETCHING C
10	1	INSPECTION B	64	10	INSPECTION C	118	16	WET ETCHING A
	2	CVD-A	65	10	ION IMPLANTATION A	119	16	ASHING A
11		INSPECTION A	66	10	ASHING A	120	16	PEELING A
12	2					_ ::	16	
13	2	CLEANING B	. 67	10	PEELING A	121		INSPECTION B
14	2	ANNEALING A	68	11	CLEANING A	122	17	PHOTOLITHOGRAPHY A
15	2	CLEANING C	69	11	CVD-A	123	17	INSPECTION B
16	3	CVD-B	70	11	INSPECTION A	124	17	INSPECTION C
17	3	CLEANING B	71	11	PHOTOLITHOGRAPHY A	125	17	DRY ETCHING C
18	3	ANNEALING B	72	11	INSPECTION B	126	17	WET ETCHING A
19	3	CLEANING C	73	11	INSPECTION C	127	17	ASHING A
20	3	PHOTOLITHOGRAPHY A	74	11	DRY ETCHING C	128	17	PEELING A
21	3	INSPECTION B	75	11	WET ETCHING A	129	17	INSPECTION B
22	3	INSPECTION C	76	11	ASHING A	130	18	SPUTTERING B
23	3	DRY ETCHING B	77	11	PEELING A	131	18	PHOTOLITHOGRAPHY A
24-	3	ASHING A	78	11	INSPECTION B	132	18	INSPECTION B
25	3	PEELING A	79	12	CLEANING A	133	18	INSPECTION C
26	3	INSPECTION B	80	12	CVD-D	134	18	DRY ETCHING D
27	4	CLEANING A	81	12	ANNEALING D	135	18	. PEELING B
28	4	THERMAL OXIDATION A	82	12	CLEANING A	136	18	INSPECTION B
29	4	INSPECTION A	83	12	PHOTOLITHOGRAPHY A	137	19	CVD-E
30	5	CVD-C	84	12	INSPECTION B	138	19	CLEANING B
31	5	ANNEALING C	85	12	INSPECTION C	139	19	ANNEALING E
32	5	PHOTOLITHOGRAPHY A	86	12	DRY ETCHING B	140	19	CLEANING A
33	5	INSPECTION C	87	12	ASHING A	141	19	PHOTOLITHOGRAPHY A
34	5	ION IMPLANTATION A	88	12	PEELING A	142	19	INSPECTION B
35	5	ASHING A	89	12	INSPECTION B	143	19	INSPECTION C
36	5	PEELING A	90	13	CLEANING A	144	19	DRY ETCHING C
37	6	PHOTOLITHOGRAPHY A	91	13	CVD-C	145	19	WET ETCHING A
38	6	INSPECTION C	92	13	PHOTOLITHOGRAPHY A	146	19	ASHING A
39	6	ION IMPLANTATION A	93	13	INSPECTION B	147	19	PEELING A
40	6	ASHING A	94	13	INSPECTION C	148	19	INSPECTION B
41	7	CLEANING A	95	13	DRY ETCHING C	149	20	SPUTTERING C
42	7	CVD-D	96	13	ASHING A	150	20	CLEANING B
43	7	ANNEALING D	97	13	PEELING A	151	20	PHOTOLITHOGRAPHY A
44	7	CLEANING A	98	13	INSPECTION B	152	20	INSPECTION B
	7		99	14	CVD-D	153	20	INSPECTION C
45	_	PHOTOLITHOGRAPHY A		+	ANNEALING D	ł — — — — — — — — — — — — — — — — — — —	20	DRY ETCHING E
46	7	INSPECTION B	100	14		154	-	
47	7	INSPECTION C	101	14	CLEANING A	155	20	ASHING A
48	7	DRY ETCHING B	102	15	SPUTTERING A	156	20	PEELING B
49	7	ASHING A	103	15	CLEANING B	157	20	INSPECTION B
50	7	PEELING A	104	15	PHOTOLITHOGRAPHY A		21	PHOTOLITHOGRAPHY A
51	7	INSPECTION B	105	15	INSPECTION B	159	21	INSPECTION C
52	8	PHOTOLITHOGRAPHY A	106	15	INSPECTION C	160	21	WET ETCHING A
53	8	INSPECTION C	107	15	DRY ETCHING A	161	21	ASHING A
54	8	ION IMPLANTATION A	108	15	ASHING A	162	21	PEELING B
		_				163	21	INSPECTION B

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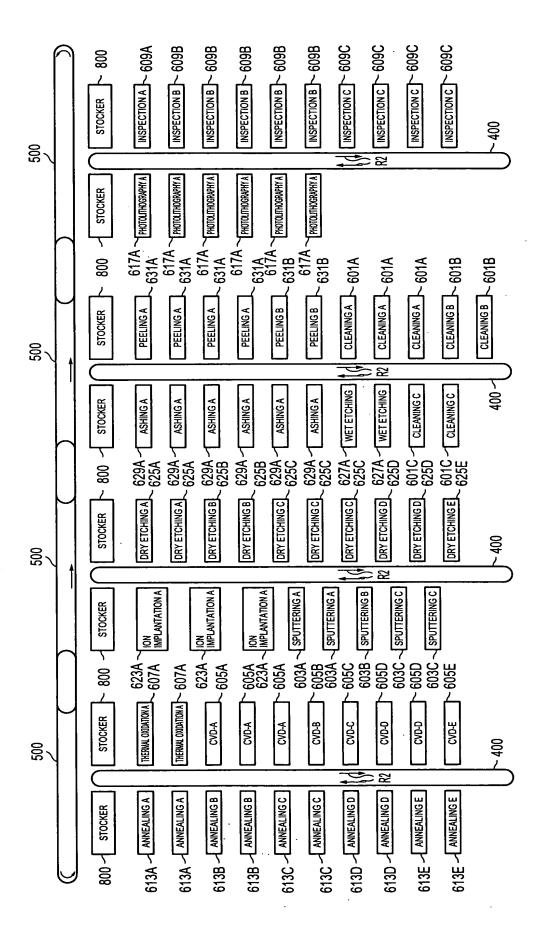


FIG. 14

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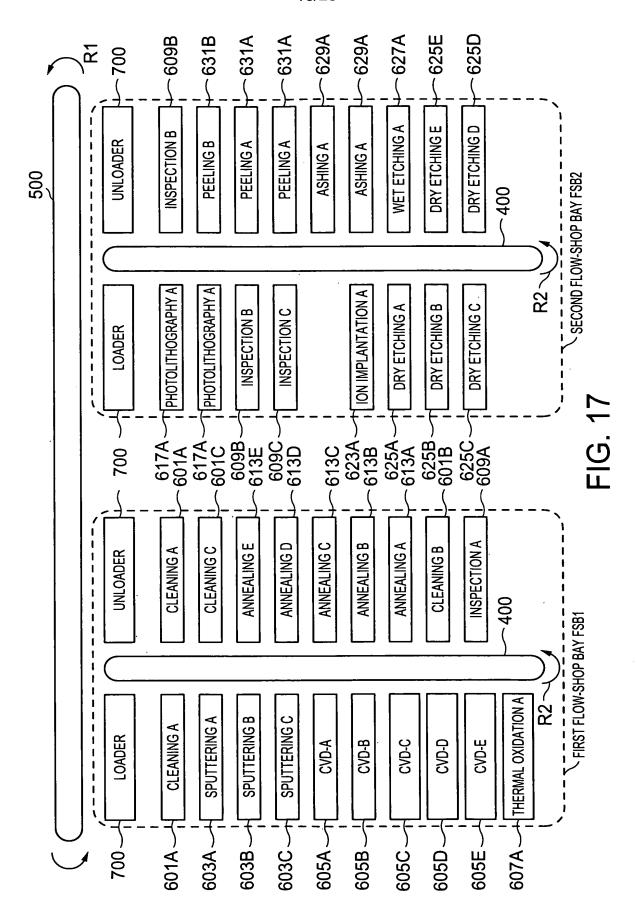
APPARATUS	NUMBER OF A	PPARATUSES
AFFARATUS	2,500 SHEETS/MONTH	10,000 SHEETS/MONTH
CVD-A	1	3
CVD-B	1	1
CVD-C	1	1
CVD-D	1	2
CVD-E	1	1
ASHING A	2	6
ANNEALING A	1	2
ANNEALING B	1	2
ANNEALING C	1	2
ANNEALING D	1	2
ANNEALING E	1	3
ION IMPLANTATION A	1	3
WET ETCHING A	1	. 2
INSPECTION A	1	1
INSPECTION B	2	5
INSPECTION C	1	4
SPUTTERING A	1	2
SPUTTERING B	1	1
SPUTTERING C	1	2
CLEANING A	1	3
CLEANING B	1	2
CLEANING C	1	2
DRY ETCHING A	1	2
DRY ETCHING B	1	2
DRY ETCHING C	1	3
DRY ETCHING D	1	2
DRY ETCHING E	1	1
THERMAL OXIDATION A	1	2
PEELING A	1	4
PEELING B	1	2
PHOTOLITHOGRAPHY A	2	6
TOTAL	34	76

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	INSPECTION PROCESS	INSPECTION B		INSPECTION B				INSPECTION B				INSPECTION B	INSPECTION B	INSPECTION B			INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B	INSPECTION B
	ASHING PEELING PROCESS PROCESS	PEELING A		PEELING A		PEELING A		PEELING A	PEELING A	PEELING A	PEELING A	PEELING A	PEELING A	PEELING A		PEELING A	PEELING A	PEELING A	PEELING B	PEELING A	PEELING B	PEELING B
	ASHING PROCESS	ASHING A		ASHING A		ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A		ASHING A	ASHING A	ASHING A		ASHING A	ASHING A	ASHING A
	ETCHING PROCESS											WET ETCHING A					WET ETCHING A	WET ETCHING A		WET ASHING A		WET ASHING A
DP FS2	SS			DRY ETCHING B				DRY ETCHING B				DRY ETCHING C	DRY ETCHING B	DRY ETCHING C		DRY ETCHING A		DRY ETCHING C	DRY ETCHING D	DRY ETCHING C	DRY ETCHING E	
SECOND FLOW-SHOP FS2	ION IMPLANTATION PROCESS					ION IMPLANTATION	INSPECTION ION IMPLANTATION C		INSPECTION ION IMPLANTATION C	INSPECTION ION IMPLANTATION C	INSPECTION INSPECTION ION IMPLANTATION B C	_										
	INSPECTION PROCESS	INSPECTION C		INSPECTION C		INSPECTION	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C		INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION
	INSPECTION INSPECTION PROCESS	INSPECTION INSPECTION B C		INSPECTION INSPECTION B C				INSPECTION B			NSPECTION B	INSPECTION B	INSPECTION INSPECTION B C	INSPECTION INSPECTION B C		INSPECTION INSPECTION B	INSPECTION INSPECTION B C	INSPECTION INSPECTION B C	INSPECTION INSPECTION B C	INSPECTION B	INSPECTION I	
	PHOTOLITHOGRAPHY PROCESS			PHOTOLITHOGRAPHY A		РНОТОЦІТНО ВРАРНУ А	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A		PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C	PHOTOLITHOGRAPHY A	РНОТОLIТНОGRAРНҮ А
E	CLEANING		CLEANING	CLEANING C				CLEANING A					CLEANING		CLEANING					LEANING		
N (2,500 SHEETS/MONTH)	ANNEALING		ANING ANNEALING B	ANNEALING B		ANNEALING C		ANNEALING					ANNEALING D		ANNEALING D		ANNEALING A			ANNEALING	EANING B	
TION (2,500)	CLEANING	CLEANING	ANING	CLEANING A		7-										CLEANING				CLEANING	CLEANING	
SS CONSTRUCTION	INSPECTION		INSPECTION CLE		INSPECTION A							INSPECTION A			į							
FLOW-SHOP PROCESS CONSTRUCTION FIRST FLOW-SHOP	FILM FORMING PROCESS	SPUTTERING	CVD-A	CVD-B	THERMAL OXIDATION A	CVD-C		C-QA-D				CVD-A	CVD-D	CVD-C	CVD-D	SPUTTERING A	CVD-E		SPUTTERING B	CVD-E	SPUTTERING C	
FLO	CLEANING	CLEANING			CLEANING A			CLEANING				CLEANING	CLEANING	CLEANING			CLEANING					
	LAYER	_	2	3	4	S	g		~	6	9	=	12	13	14	15	9	12	85	2	82	2

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Title: MANUFACTURING APPARATUS, AND MANUFACTURING METHOD

Inventors: Shuji TANAKA et al. Atty. Ref.: 9319S-000711

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FIRST FLOW-SHOP FS1

(A)	APPARATUS	NUMBER OF APPARATUSES
	CVD-A	1
	CVD-B	1
	CVD-C	1
	CVD-D	1
	CVD-E	1
	ANNEALING A	1
	ANNEALING B	1
	ANNEALING C	1
	ANNEALING D	1
	ANNEALING E	1
	INSPECTION A	1
	SPUTTERING A	1
	SPUTTERING B	1
	SPUTTERING C	1
	CLEANING A	2
	CLEANING B	1
•	CLEANING C	1
,	THERMAL OXIDATION A	1
	TOTAL	19

SECOND FLOW-SHOP FS2

(B)	APPARATUS	NUMBER OF APPARATUSES
	ASHING A	2
•	ION IMPLANTATION A	1
	WET ETCHING A	1
	INSPECTION B	2
	INSPECTION C	1
	DRY ETCHING A	1
	DRY ETCHING B	1
	DRY ETCHING C	1
	DRY ETCHING D	1
	DRY ETCHING E	1
	PEELING A	1
	PEELING B	1
	PHOTOLITHOGRAPHY A	2
	TOTAL	16

FIG. 18

Title: MANUFACTURING APPARATUS, AND MANUFACTURING METHOD

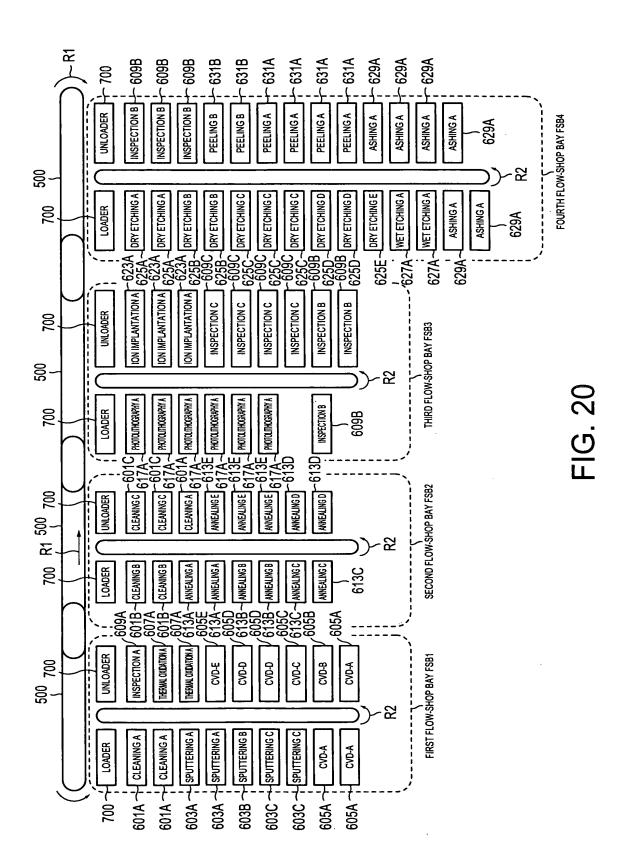
Inventors: Shuji TANAKA et al. Atty. Ref.: 9319S-000711

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	S INSPECTION S PROCESS	PEELING INSPECTION A B		INSPECTION B				INSPECTION B	<i>(</i> 2)	(0	(D	INSPECTION B	INSPECTION B	INSPECTION B		PEELING INSPECTION A B	INSPECTION B	INSPECTION B	PEELING INSPECTION B B	INSPECTION B	INSPECTION B	PEELING INSPECTION B B
55 PS	PEELING			PEELING		PEELING A		PEELING	PEELING	PEELING	PEELING A	PEELING A	PEELING A	PEELING			PEELING	PEELING A		PEELING A	PEELING B	
FOURTH FLOW-SHOP FS4	ASHING PEELING PROCESS	ASHING A		ASHING A		ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A	ASHING A		ASHING A	ASHING A	ASHING A		ASHING A	ASHING A	ASHING A
FOURT	FE											WET ASHING A					ETCHING A ASHING A	ETCHING A ASHING A		DRY WET ASHING A		WET ASHING A
	ETCHING PROCESS	DRY ETCHING A		DRY ETCHING B				DRY ETCHING B				DRY ETCHING C	DRY ETCHING B	DRY ETCHING C		DRY ETCHING A	DRY ETCHING C	DRY ETCHING C	DRY ETCHING D	DRY ETCHING C	DRY ETCHING E	
	INSPECTION INSPECTION ION IMPLANTATION PROCESS PROCESS					NSPECTION ION IMPLANTATION C A	INSPECTION ION IMPLANTATION C		NSPECTION ION IMPLANTATION C	INSPECTION ION IMPLANTATION C A	ION IMPLANTATION A								i			
SHOP FS3	INSPECTION PROCESS	INSPECTION C		INSPECTION C		INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION		INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C	INSPECTION C
THIRD FLOW-SHOP FS3	INSPECTION PROCESS	INSPECTION INSPECTION B C		INSPECTION INSPECTION 8			•	INSPECTION INSPECTION B C			INSPECTION B	INSPECTION INSPECTION B C	INSPECTION INSPECTION B C	INSPECTION INSPECTION B		INSPECTION B	INSPECTION B	INSPECTION INSPECTION B	INSPECTION INSPECTION B C	INSPECTION INSPECTION B	INSPECTION INSPECTION B C	
	CLEANING ANNEALING CLEANING PHOTOLITHOGRAPHY PROCESS PROCESS PROCESS	PHOTOLITHOGRAPHY A		CLEANING PHOTOLITHOGRAPHY C A		PHOTOLITHOGRAPHY A	РНОТОLITНОGRAРНҮ А	CLEANING PHOTOLITHOGRAPHY	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY INSPECTION ION IMPLANTATION A B C	РНОТОLІТНОGRAРНҮ А	CLEANING PHOTOLITHOGRAPHY A	РНОТОLІТНОGRAРНҮ А		PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C	PHOTOLITHOGRAPHY INSPECTION INSPECTION A B C	PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	CLEANING PHOTOLITHOGRAPHY A	PHOTOLITHOGRAPHY A	РНОТОЦІТНОСВАРНУ А
NTH)	CLEANING		CLEANING	CLEANING				CLEANING							CLEANING							
(10,000 SHEETS/MONTH) SECOND FLOW-SHOP FS2	ANNEALING PROCESS		EANING ANNEALING CLEANING B C	EANING ANNEALING B B		ANNEALING		ANNEALING					ANNEALING D		ANNEALING (ANNEALING A			EANING ANNEALING B		
TION (10,000	CLEANING	CLEANING B	ರ	CLEANING												CLEANING				CLEANING	CLEANING	
S CONSTRUC	INSPECTION		INSPECTION A		INSPECTION A							INSPECTION A										
FLOW-SHOP PROCESS CONSTRUCTION (10,000 SHEETS/MONTH) FIRST FLOW-SHOP FS1 SECOND FLOW-SHOP FS	CLEANING FILM FORMING INSPECTION PROCESS PROCESS	SPUTTERING A	CVD-A	8-dvo	THERMAL OXIDATION A	cvp-c		C-D-D				CVD-A	CVD-D	CVD-C	CVD-D	SPUTTERING A	CVD-E		SPUTTERING	CVD-E	SPUTTERING C	
FO		CLEANING			CLEANING A			CLEANING				CLEANING	CLEANING	CLEANING			CLEANING					
	LAYER	-	2	က	4	ĸ	9	7	œ	6	9	Ξ	12	5	\$	15	91	11	18	5	8	21

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Title: MANUFACTURING APPARATUS, AND MANUFACTURING METHOD

Inventors: Shuji TANAKA et al. Atty. Ref.: 9319S-000711

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JW-SHOP	NUMBER OF APPARATUSES														<u> </u>			
FOURTH FLOW-SHOP	APPARATUS	DRY ETCHING A	DRY ETCHING B	DRY ETCHING C	DRY ETCHING D	DRY ETCHING E	WET ETCHING A	ASHING A	PEELING A	PEELING B	INSPECTION B	TOTAI	10171		(D)			
W-SHOP	NUMBER OF APPARATUSES	9	3	4	3	16												
THIRD FLOW-SHOP	APPARATUS	PHOTOLITHOGRAPHY A	INSPECTION B	INSPECTION C	ION IMPLANTATION A	TOTAL									(O)			
ECOND FLOW-SHOP	NUMBER OF APPARATUSES	2	2	2	2	3	1	2	2	16					(B)			L
SECOND F	APPARATUS	ANNEALING A	ANNEALING B	ANNEALING C	ANNEALING D	ANNEALING E	CLEANING A	CLEANING B	CLEANING C	TOTAL					-			
HOP	NUMBER OF APPARATUSES	3	-	-	2	-	2	•	2	,	2	6	7	18				
FIRST FLOW-SHOP	APPARATUS	CVD-A	CVD-B	CVD-C	CVD-D	CVD-E	THERMAL OXIDATION A	INSPECTION A	SPUTTERING A	SPUTTERING B	SPLITTERING C	CI CANINIO A	CLEANING A	TOTAL	8	•		

COMPLETION 609B INSPECTION B FOR TWENT-FIRST LAYER ASHING A FOR TWENT-FIRST LAYER WET ETCHING A FOR TWENT-FIRST LAYER WET ETCHING A FOR TWENT-FIRST LAYER
609B FOR INFEECTION B 609C FOR INFEECTION C 625C FOR INFEECTION C 625C FOR INFEECTION C 627A FOR INFEECTION B 629A FOR INFEECTION B 631A FOR INFEECTION B 603C FOR INFEECTION B 603C FOR INFEECTION B 601B FOR INFEECTION B 609B FOR INFEECTION B 609B FOR INFEECTION B 609B FOR INFEECTION B 609B FOR INFEECTION B
HIRD LAYER - 609C 625B - 609B 629A - 617A - 617A - 617A - 601C - 601C - 601B - 601C - 601B
INSPECTION C FOR THIRD LAYER 609B INSPECTION B FOR THIRD LAYER 617A PHOTOLITHOGRAPHY A FOR THIRD LAYER 601C CLEANING C FOR THIRD LAYER 601B CLEANING B FOR THIRD LAYER 601B CLEANING C FOR SECOND LAYER 601B CLEANING B FOR THIRD LAYER 601B CLEANING B FOR THIRD LAYER 601B CLEANING B FOR SECOND LAYER 601B CLEANING B FOR SECOND LAYER 609A INSPECTION A FOR SECOND LAYER
TRANSFER COTA COTA COTA COTA COTA COTA COTA COTA

APPARATUS	NUMBER OF A	PPARATUSES
AFFARATUS	2,500 SHEETS/MONTH	10,000 SHEETS/MONTH
CVD-A	2	3
CVD-B	1	. 1
CVD-C	2	2
CVD-D	3	3
CVD-E	2	2
ASHING A	17	17
ANNEALING A	2	2
ANNEALING B	1	2
ANNEALING C	1	2
ANNEALING D	3	3
ANNEALING E	1	3
ION IMPLANTATION A	5	5
WET ETCHING A	5	5
INSPECTION A	3	3
INSPECTION B	26	26
INSPECTION C	18	18
SPUTTERING A	2	2
SPUTTERING B	1	1
SPUTTERING C	1	. 2
CLEANING A	11	11
CLEANING B	6	6
CLEANING C	2	2
DRY ETCHING A	2	2
DRY ETCHING B	3	3
DRY ETCHING C	5	5
DRY ETCHING D	1	2
DRY ETCHING E	1	1
THERMAL OXIDATION A	1	2
PEELING A	14	14
PEELING B	3	3
PHOTOLITHOGRAPHY A	18	18
TOTAL	163	171

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	SMALL-SCALE	AMOUNT OF PRODU	L-SCALE AMOUNT OF PRODUCTION (ABOUT 2.500 SHEETS/MONTH)	MIDDLE-SCALE	AMOUNT OF PRODU	MIDDLE-SCALE AMOUNT OF PRODUCTION (ABOUT 10,000 SHEETS/MONTH)
APPARATUS	JOB-SHOP	COMPLETE FLOW-SHOP	FLOW-SHOP ACCORDING TO THE PRESENT EMBODIMENT	JOB-SHOP	COMPLETE FLOW-SHOP	FLOW-SHOP ACCORDING TO THE PRESENT EMBODIMENT
CVD-A	-	2	1	3	3	3
CVD-B	-	-	1	1	1	
CVD-C		2	1	1	2	
CVD-D	-	3	1	2	3	2
CVD-E	-	2	1	1	2	
ASHING A	2	17	2	9	17	9
ANNEALING A	-	2	1	2	2	2
ANNEALING B	-	-	-	2	2	2
ANNEALING C	-	_	1	2	2	2
ANNEALING D	-	3		2	3	2
ANNEALING E	-	-	-	3	3	3
ION IMPLANTATION A	-	5	1	3	5	3
WET ETCHING A	-	. 5	1	2	. 5	2
INSPECTION A	-	3	1	1	3	1
INSPECTION B	2	26	2	. 5	26	9
INSPECTION C	_	18	l	4	18	4
SPUTTERING A	•	2	1	2	2	2
SPUTTERING B	1	1		1	_	
SPUTTERING C	-	_	1	2	2	2
CLEANING A	-	11	2	3 .	11	3
CLEANING B	1	9	1	2	9	2
CLEANING C	1	2	1	2	2	2
DRY ETCHING A	1	2	1	2	2	2
DRY ETCHING B	1	3		2	3	2
DRY ETCHING C		5	1	3	5	3
DRY ETCHING D	-	1	1	2	2	2
DRY ETCHING E		1	1	1	-	
THERMAL OXIDATION A	1	1		2	2	2
PEELING A	1	14	1	4	14	4
PEELING B	1	3		2	3	2
PHOTOLITHOGRAPHY A	2	18	2	9	18	9
TOTAL	34	163	35	76	171	77
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FIG. 24